

REMARKS

I. Introduction

In view of the above amendments and the following remarks, reconsideration of the rejections and objections contained in the Office Action of June 9, 2009 is respectfully requested.

By this amendment, claims 29, 31-33, and 53 have been amended, claims 45-47 have been cancelled without prejudice or disclaimer of the subject matter therein, and claims 57-59 have been added. Claims 29-44 and 48-59 are now pending in the application. No new matter has been added by these amendments.

The specification has been reviewed and revised. No new matter has been added by these revisions. Entry of the specification amendments is thus respectfully requested.

II. Objection to the Specification

Beginning on page 2 of the Office Action, the specification is objected to for including a non-descriptive title. Applicants submit that the amended title is sufficiently descriptive; withdrawal of this objection is respectfully requested.

III. 35 U.S.C. § 112

On page 3 of the Office Action, claims 29-33, 53, and 54 are rejected as being indefinite. Each of claims 29 and 53 have been amended to correct the antecedent basis issue noted by the Examiner, and claim 53 has been amended to remove the recitation of “time-sharingly.” Accordingly, Applicants respectfully request withdrawal of these rejections.

IV. Prior Art Rejections

Currently, claims 29 and 30 stand rejected under 35 U.S.C. § 102(c) as being unpatentable over Matsumoto et al. (US 2004/0037196), claims 31 and 32 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Matsumoto et al. in view of Saimi et al. (US 6,430,137), claim 33 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Matsumoto et al. in view of Saimi et al. and further in view of Mizuno et al. (US 2004/0114494), claim 53 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Matsumoto et al. in view of Kim et al. (US 2002/0018435), and claim 54 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Matsumoto et al. in view of Kim et al. and further in view of Saimi et al.

Claim 29 is patentable over Matsumoto et al., Saimi et al., Mizuno et al., and Kim et al. for the following reasons. Claim 29 requires an optical disk apparatus for recording or reproducing information on or from an optical disk which has a transparent planar disk base member, a recording layer formed on the disk base member, and a reflecting layer for reflecting a laser beam by way of the disk base member, the reflecting layer being disposed on an opposite side of the disk base member than the recording layer, and the optical disk being configured such that an interval between the recording layer and the reflecting layer is longer than a wavelength of the laser beam, said optical disk apparatus comprising a light source which irradiates the laser beam for recording or reproducing the information on or from the optical disk, wherein said light source irradiates the laser beam onto the recording layer of the optical disk by way of the disk base member to form a focusing spot on the recording layer; a photo detector which receives from the reflecting layer a reflected beam of the laser beam irradiated from said light source; and

a tilt detecting unit which detects tilt of the optical disk by using an output from said photo detector.

Matsumoto et al. discloses an optical system which has a laser device (12) and a tilt detector (95) which is distinct from the laser device (12). As explained in paragraph 0134 of Matsumoto et al., a light emitting diode (112) of the tilt detector (95) emits a light which is reflected off the recording medium (1) and received by the photodiodes (113A-113D). In contrast, claim 29 requires a light source which irradiates a laser beam *for recording or reproducing information* on or from an optical disk, a photo detector which receives a reflected beam of *the laser beam*, and a tilt detecting unit which detects tilt by using an output from said photo detector. In other words, the configuration of claim 29 uses a laser beam for recording or reproducing information and *the same laser beam* is reflected off the reflecting layer and received by the photo detector to detect tilt of the optical disk. Matsumoto et al. uses a laser device (12) to record or reproduce information and *a different light source* (112) for detecting tilt of the optical disk. Because Matsumoto et al. does not disclose a light source which irradiates a laser beam for recording or reproducing information on or from an optical disk, a photo detector which receives a reflected beam of the laser beam, and a tilt detecting unit which detects tilt by using an output from said photo detector, Matsumoto et al. cannot meet the requirements of claim 29.

Claim 53 is patentable over Matsumoto et al., Saimi et al., Mizuno et al., and Kim et al. for the following reasons. Claim 53 requires an optical disk apparatus comprising a light source which irradiates a laser beam onto a recording layer of an optical disk by way of a disk base member to form a focusing spot on the recording layer, the optical disk having a transparent planar disk base member, and the recording layer formed on the disk base member; a wavefront

controlling device which controls a wavefront of the laser beam irradiated onto the recording layer such that a defocus aberration or a spherical aberration is increased; a photo detector which receives a reflected beam from the recording layer; and a tilt detecting unit which detects tilt of the optical disk by detecting a tilt aberration or a coma aberration included in the reflected beam by using an output from said photo detector.

On page 8 of the Office Action it is acknowledged that Matsumoto et al. fails to disclose a wavefront controlling device as required by claim 53; however, it is asserted that Kim et al. discloses the wavefront controlling device. Claim 53 has been amended to require that the wave front controlling device control a wavefront of the laser beam such that a defocus aberration or a spherical aberration *is increased*. In contrast, the wavefront controller of Kim et al. is disclosed as cancelling the aberration, i.e. the aberration *is decreased*. (See paragraphs 0076 and 0079 of Kim et al.: “the second aberration correction element 230 is designed such that it passes the first light beam 101a without causing any wavefront variation, causing a phase difference for the second light beam. Thus, the outgoing wavefront from the second aberration correction element 230 has the inverse shape...*thereby cancelling the aberrations*.” Emphasis added.) Because Kim et al. does not disclose a wave front controlling device which controls a wavefront of the laser beam such that a defocus aberration or a spherical aberration is increased, Kim et al. cannot meet the requirements of claim 53.

It is thus submitted that the invention of the present application, as defined in claims 1 and 53, is not anticipated nor rendered obvious by the prior art, and yields significant advantages over the prior art. Allowance is respectfully requested.

Claims 30-33 and 57-59 depend, directly or indirectly, from claim 29 and are thus allowable for at least the reasons set forth above in support of claim 29. Claims 54 depend,

directly or indirectly, from claim 53 and are thus allowable for at least the reasons set forth above in support of claim 53.

In view of the foregoing amendments and remarks, inasmuch as all of the outstanding issues have been addressed, Applicants respectfully submit that the present application is now in condition for allowance, and action to such effect is earnestly solicited. Should any issues remain after consideration of the response, however, the Examiner is invited to telephone the undersigned at the Examiner's convenience.

Respectfully submitted,

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